

Appl. No. : 09/782,588
Filed: February 12, 2001

REMARKS

Claims 1-4, 6, 7, 10-12, 18-25 and 27-33 remain presented for examination. No new matter has been added by this amendment. Applicant wishes to thank the Examiner for examination of the pending claims.

Claim 28 is amended herein to indicate that the microspheres are located in discrete sites configured to hold a single microsphere. Support for the amendment is found in the specification, for example, at page 11, line 39, through page 12, line 3.

Discussion of Rejection Under 35 U.S.C. § 103

The Examiner rejected Claims 1-4, 6, 7, 10-12, 18-25 and 27-33 under 35 U.S.C. § 103(a) as being unpatentable over Felder *et al.* (U.S. Pat. No. 6,232,066) in view of Hurd *et al.* (U.S. Pat. No. 4,812,216), Schembri (U.S. Pat. No. 6,261,521) or Chu (U.S. Pat. No. 6,703,247). Applicants respectfully disagree.

To establish a *prima facie* case of obviousness a three-prong test must be met. First, there must be some suggestion or motivation, either in the references or in the knowledge generally available among those of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success found in the prior art. Third, the prior art must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991).

The cited references by Felder *et al.*, Hurd *et al.*, Schembri and Chu cannot render the claimed compositions and methods *prima facie* obvious because the cited references, alone or combined, do not teach or suggest all elements of any of the claims. In particular, the cited references do not teach or suggest assay locations having discrete sites configured to hold a single microsphere, as recited in Claims 1, 18 and 28, and in claims dependent therefrom.

The Office Action states that Felder *et al.* disclose assay locations having "discrete sites configured to hold a single microsphere." The Examiner points to support for this statement at Column 6, lines 38-51 and Column 8, lines 40-41 of Felder, *et al.*. However, Felder *et al.* do not teach or suggest microspheres in discrete sites, much less discrete sites configured to hold a single microsphere. Felder *et al.* disclose compositions for performing assays using arrays of probes. Felder *et al.*, at Column 6, lines 38-51 teach that regions of a surface can be subdivided such that "anchors" are physically separated by an indentation or dimple, where the "dimpled surface reduces the tolerance required for physically placing a single anchor (or group of

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anchors) into each designated space." Thus, Felder *et al.* only teach that the dimples are used for physical placement of anchors and do not teach or suggest that anything other than anchors can be placed in the dimples.

The term "anchor" as defined by Felder *et al.* does not include microspheres, as alleged by the Examiner. The paragraph of Felder *et al.* immediately following the above-discussed section defines the term "anchor" as "entity or substance, e.g. molecule (or "group" of substantially identical such substances (see, e.g., FIG. 7)) which is associated with (e.g., immobilized on, or attached either covalently or non-covalently to) the surface, or which is a portion of such surface (e.g., derivatized portion of a plastic surface), and which can undergo specific interaction or association with a linker or other substance as described herein." (Column 6, lines 52-59). This paragraph exemplifies an anchor as a nucleic acid, protein, organic molecule, and inorganic substance (Column 6, line 64, through column 7, line 41). Thus, Felder *et al.* teach that an anchor is a molecule that is attached to a surface; Felder *et al.* never teach or suggest that the term "anchor" includes a structure such as a microsphere.

Accordingly, Felder *et al.* do not teach or suggest that anything other than anchors can be placed in the dimples, and the term "anchor" as defined by Felder *et al.* does not include microspheres. Therefore, Felder *et al.* do not teach or suggest that the dimples are configured to hold microspheres of any quantity. Moreover, combination of Felder, *et al.* with Hurd *et al.*, Shembri or Chu does not cure this defect since none of these other references describe the use of a microsphere in a well.

Although, in an unrelated section of the disclosure, Felder *et al.*, at column 8, lines 39-61, teach that an "anchor can be attached to a particle, bead, or the like," this teaching only discusses a bead as another, alternative surface to which an anchor can be attached. Felder *et al.* never teaches or suggests the use of anchor-attached beads, or beads on their own, located within dimples.

In sum, no portion of Felder *et al.* teaches or suggests discrete sites configured to hold a single microsphere. Felder *et al.* never relate the use of "dimples" to the use of "beads". Without the guidance of Applicant's specification, one skilled in the art could not have understood Felder *et al.* to teach or suggest discrete sites configured to hold a single microsphere. Accordingly, the disclosure of Felder *et al.* fails to teach or suggest the claim element of assay locations having discrete sites configured to hold a single microsphere.

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As mentioned above, none of Hurd *et al.*, Schembri or Chu provides that which is lacking in Felder *et al.* Hurd *et al.*, Schembri or Chu do not teach or suggest discrete sites of assay locations nor teach or suggest microspheres. Thus, no combination of Felder *et al.*, Hurd *et al.*, Schembri and Chu extend the teachings of Felder *et al.* alone. Accordingly, the cited references cannot render the claimed compositions and methods *prima facie* obvious because the cited references, alone or combined, do not teach or suggest all claim limitations.

For all of the above reasons, Applicants respectfully request withdrawal of all rejections under 35 U.S.C. § 103, and allowance of the pending application.


Applicants have endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims, the reasons therefore, and arguments in support of the patentability of the pending claim set are presented above. Any claim amendments which are not specifically discussed in the above remarks are made in order to improve the clarity of claim language, to correct grammatical mistakes or ambiguities, and to otherwise improve the capacity of the claims to particularly and distinctly point out the invention to those of skill in the art. In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is specifically requested. If the Examiner finds any remaining impediment to the prompt allowance of these claims that could be clarified with a telephone conference, the Examiner is respectfully requested to initiate the same with the undersigned.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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